Name:

## at1113exam: Expand, factor, and solve quadratics (v213)

1. Expand the following expression into standard form.

$$(5x + 8)(5x - 8)$$

$25x^2 - 40x + 40x - 64$

$25x^2 - 64$

2. Solve the equation.

$$(9x + 2)(3x + 5) = 0$$

$x = \frac{-2}{9}$ $\quad$ $x = \frac{-5}{3}$

3. Expand the following expression into standard form.

$$(5x - 9)^2$$

$25x^2 - 45x - 45x + 81$

$25x^2 - 90x + 81$

4. Expand the following expression into standard form.

$$(9x - 4)(8x - 7)$$

$72x^2 - 63x - 32x + 28$

$72x^2 - 95x + 28$

5. Solve the equation with factoring by grouping.

$$20x^2 - 15x + 24x - 18 = 0$$

$$(5x + 6)(4x - 3) = 0$$

$$x = \frac{-6}{5} \qquad x = \frac{3}{4}$$

6. Factor the expression.

$$9x^2 - 16$$

$$(3x + 4)(3x - 4)$$

7. Solve the equation.

$$8x^2 + 40x + 43 = 3x^2 + 2x - 5$$

$$5x^2 + 38x + 48 = 0$$

$$(5x + 8)(x + 6) = 0$$

$$x = \frac{-8}{5} \qquad x = -6$$

8. Factor the expression.

$$x^2 + 11x + 28$$

$$(x + 7)(x + 4)$$